

Environmental  
Restoration  
Contractor

# **ERC Team**

# **Meeting Minutes**

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**SUBJECT** GW/VZ INTEGRATION OPEN PROJECT MEETING - MARCH 20, 2000

**TO** Distribution

**FROM** Michael J. Graham, Groundwater/Vadose Zone Integration Project Manager

**DATE** March 31, 2000

**ATTENDEES**

See Attached List

**DISTRIBUTION**

Attendees  
GW/VZ Distribution List  
Document and Information Services H0-09

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**NEXT GW/VZ INTEGRATION PROJECT OPEN MEETING:**

Next Meeting: Monday, April 3, 2000 – 1-3 p.m.  
Location: Bechtel Hanford, Inc., Assembly Room (Badging Required)  
Local Call-In Number: (509) 376-7411  
Toll Free Call-In Number: (800) 664-0771

**MEETING MINUTES:**

A Groundwater/Vadose Zone (GW/VZ) Integration Project Open Meeting was held on March 20, 2000 in Richland, Washington, at the Bechtel Hanford, Inc. (BHI) Assembly Room.

**PROJECT REPORT:**

**INTEGRATED PROJECT SCHEDULE (Michael Graham):**

This schedule is something that was requested at an earlier meeting. It cuts across the entire scope of the Integration Project and is hopefully a good communication tool. It shows key Project milestones and deliverables.

Things are a few items on the schedule worth pointing out. Under the Technical Review heading, there is an Integration Project Expert Panel (IPEP) Meeting coming up at the end of May (May 24-26). Under the Management and Integration heading is the work on the virtual library and database configuration. This work will allow users outside Hanford to access, sort, and integrate to a certain degree the information contained in various Hanford databases. We'll have some demonstrations of that when things are a little further along in the development process.

In the Characterization of Systems task, there is a Conceptual Model White Paper coming in the April timeframe that will feed back into the development of the vadose zone conceptual models and inventory studies. In Groundwater Management, the pump-and-treats are humming along, and they're in the process of installing the last part of the In Situ REDOX (reduction/oxidation) Manipulation (ISRM).

COMMENT: I'd appreciate it if you could put a date on the schedule.

RESPONSE: Yes. That's a good point. We can do that.

COMMENT: There's a status line in March, but it would be nice to have a date.

SYSTEM ASSESSMENT CAPABILITY UPDATE (Bob Bryce):

I really haven't been in on any public meetings since the IPEP meeting in January. I want to give an update on the ongoing work of the System Assessment Capability (SAC) team. I'll start off by going down the Project Schedule.

The schedule shows the SAC Rev. 0 Design Report coming out in April. That has been drafted and has undergone external review from Sandia National Laboratories and Robert Hammer, a representative from Tetra Tech. We wanted him to look at the technical details of how the code will operate. He gave us a few good suggestions on file structure. We're hoping to have it to the Department of Energy Richland Operations Office (DOE-RL) by the end of March. Right now we're about 15 days ahead of schedule. We'd like Dr. Ed Berkey and Dr. Mike Kavanaugh from the IPEP to give it a management level review. We'll get it out for public review prior to the IPEP review.

We're planning to hold a meeting in early May with Drs. Berkey and Kavanaugh. This meeting will be open to everyone and will give stakeholders, regulators, and Tribal Nations a chance to share comments with the IPEP representatives on what they see in the document. This gives Ed and Mike a chance to consider those ideas when they give their comments.

The document will be out for a 45-day public review period. Unfortunately due to the way things are sequenced, this review will not have an effect on Rev. 0 of the SAC. Comments from the review will be incorporated for use in Rev. 1. That's something we'll tackle next fiscal year and decide how the comments will be included in Rev. 1.

The next item on the schedule is "Assemble Rev. 0 Capability." We're currently writing the code to make the technical elements talk to each other. The hardware for the system was set up last week.

The last line on the schedule deals with assessing the requirements for the SAC Rev. 1. We originally thought that we'd do that now in order to let the Characterization of Systems people know what the data needs were for Rev. 1. We've been thinking that over. We now think that we'd like to run Rev. 0 first and take advantage of any lessons learned from that in the design of Rev. 1. As a result, the Rev. 1 requirements would get pushed out to the end of the fiscal year or beyond.

The Integration Project is holding a contractor retreat this week to discuss integrated work scope plans for next year. We'll look at how the thinking has evolved on Science and Technology (S&T), SAC, and field characterization. The plan for the SAC was laid out over a year ago with the idea of yearly, ongoing revisions to the SAC. As the SAC is getting a little more fleshed out, we're seeing what that would mean. There would be a campaign of modeling and then data and then another campaign of modeling and then data. There's a potential for a rather large investment in modeling every year without a chance to really analyze the data to verify the models.

QUESTION: Would this be an early use of Rev. 0?

RESPONSE: It would be one of the things we'd look at. The initial plan is to look at the Hanford Site Disposition Baseline from now to closure. People have also said that a "no-action" alternative needs to be assessed. It would determine the impacts if, instead of spending all the funds to clean up the site, we don't do anything at all. That alternative is not something that's been developed, but it needs to be looked at. It helps to decide what makes sense to do first. We need a no action alternative defined so that people have ideas for prioritization and planning scenarios. The next thing coming up in the near future is that the Sitewide Composite Analysis needs to be redone in 2003. We need to determine how the SAC tool would feed into that. The Composite Analysis would be the first formal use of the SAC tool. We'll start that effort in late 2002.

QUESTION: Will that be restricted to the 200 Area?

ANSWER: No. It will cover the whole site; radionuclides and chemicals.

COMMENT: It was DOE Headquarters (HQ) guidance to expand the analysis from just the 200 Area to the full site. The intent is that it be a full site analysis.

COMMENT: That sounds like the SAC itself.

RESPONSE: Absolutely. The SAC will meet the requirements for the Composite Analysis.

COMMENT: It's a chance to bring things together and be more efficient.

COMMENT: This will go through both internal and external validation.

COMMENT: How much can you really use this tool? There are schools on both the extremes of thought. There was a discussion last week about non-compliance levels. This would be something the SAC could help with. For example, what happens if you carry out all of the plans as currently defined and still don't meet compliance? It's really not known what the effects of all the cleanup plans will be. That needs to be determined.

QUESTION: Are you collecting insight from stuff done previously? Things like the Environmental Impact Statement (EIS) and the old Composite Analysis, even the Columbia River Comprehensive Impact Assessment (CRCIA) analysis?

ANSWER: Those were questions asked of us when we put this all together last September. We were asked to go look at CRCIA and the conceptual models for that, but we were not asked to assemble all the insights from those. We need to look at whether it would make sense to compile those and how useful that would be.

COMMENT: Here's something I (Marty Bensky) would like to toss out on the table. Is it really more effective to spend the Hanford money at Hanford, or would there be a greater benefit to spend the money upstream? I ask that question periodically but I never get an answer. I get a response of "yes, there's some hazard from upstream," but no one proposes how to handle it. It's just a question of where to spend the money.

RESPONSE: There are certainly impacts from upstream as well. However, the purpose of the SAC is to determine the effects from Hanford.

QUESTION: Does the 2003 Composite Analysis include ecological risk?

ANSWER: Yes.

QUESTION: What's driving this process?

ANSWER: The idea driving this is that there is a requirement to redo the Composite Analysis every 5 years. The original analysis was done in 1998, so that would make the next one due in 2003. There's a bit of a conflict ongoing over whether the 5 year requirement refers to when the analysis was first generated or when it was accepted, but we're going to start our work at the same time regardless.

QUESTION: Risk isn't discussed nearly enough. Is Rev. 0 going to be based on threshold?

ANSWER: The initial SAC will be based on the linear, no threshold model. At that point, we can estimate how potential contaminants will be distributed in the future. There are all sorts of different ways to look at it. Do you work from a no-action alternative? Do you use the set of data on distribution of contaminants that comes out of the assessment? We need to decide what things there are to be analyzed without going through a full Rev. 1 process.

QUESTION: Will the Rev. 0 analysis include risk?

ANSWER: Yes.

RIVER PROTECTION PROJECT ASSESSMENTS (Tony Knepp):

I'd like to give an update on the work we're doing in the Tank Farms. The core of the work we're doing is to collect new data. We've got the rig for the drilling of the slant borehole beneath tank SX-108 set up and running right now a little south of the actual spot where we'll do the drilling. We've slammed down about 90 feet so far. We're doing a run through of the sampling technique and we will be doing a full dress rehearsal next week. We're collecting seismic data too. We'll be doing the drilling under SX-108 about a month from now. This is really just a glorified pile driver, but it's very specialized. The sampling device and sampling methods are also all specially designed for this piece of work. It's unique to the Tank Farms and unique in its simplicity. The data from the slant hole will support the Field Investigation Report due out in Dec 2000

We're at the point of putting together the field program for the next fiscal year. We're doing planning now, and we will get the plans out to the stakeholders and the Washington State Department of Ecology (Ecology) as soon as we're ready. We're planning on focusing on the B-BX-BY Tank Farms next year.

We're starting our kick-off for the Field Investigation reports. There will be a report for each of the Tank Farms. It will represent the work done over the year. It requires that a vadose zone model is selected, and we have briefed Ecology about that. We're going to send out for bids to different vendors to supply the work. We should see something back about that in about 6 weeks.

QUESTION: Is the planning all done for the SX Tank Farm?

ANSWER: Yes. Now we're moving on to the planning for the B and T Waste Management Areas (WMAs). We've asked Ecology for a delay in the schedule for producing those. We can grind out the plans, but we're working against a very tight timeline. Pretty soon we'll be into planning, reporting, and collecting data all at the same time. It will soon become a matter of producing a quality plan or keeping to the schedule. You can't have one but not the other. We've submitted our request to Stan Leja and Phil Staats of Ecology. We just want to loosen up the schedule a bit. Let's make a better product and give more people time to look at what were doing. In the way things are structured now, there's simply no time for public review of anything.

QUESTION: Does every tank farm need to be characterized?

ANSWER: Only the farms in the WMAs listed in the Resource Conservation and Recovery Act (RCRA) need to be covered.

COMMENT: This is a contributing factor to the ultimate source term for the SAC.

RESPONSE: There's a misconception about that. We will make estimates of the contaminants under SX-108 and SX-109. This area has the largest curie content in the tank farms. We'll pick a vadose zone model and make an estimate of the flux to groundwater based on that, and that will be provided to the SAC model. The SAC is sitewide model. That's a very large scale when compared to a tank farm that measures three tanks across by four tanks long. The SAC model will take the data we provide and combine it with data on other potential contaminants across the site. We will provide some nodes to the model, albeit from some highly contaminated spots, but we'll just be one of many sources of those nodes. We'll be the proud owners of about 12 nodes. There will likely be a couple of thousand others.

COMMENT: We've got a film crew out in the field shooting the dress rehearsal, so we will have some record of that activity.

COMMENT: It's really just a hammer hitting a piece of pipe, but in practice it's a pipe in a pipe with no connectors. That helps to keep possible drag-down from affecting the data. We drive both pipes down to a certain depth, pull out the center pipe, and then drive down through the hole to take the sample.

QUESTION: How are you handling the hot samples?

ANSWER: That's the beast of this. The samples are taken already wrapped in a lead casing. We just put a cap on it. It keeps things to a remarkably low rem.

COMMENT: The system allows for a shorter sample collection time and collection of more samples. You just go ahead of the string, then pull a sample, then go down another five feet, and get another sample. It's a neat device. The simplicity of it is wonderful.

TRITIUM/618-11 BURIAL GROUND UPDATE (Jane Borghese):

I'd like to give an update on the ongoing tritium investigation out at the 618-11 Burial Ground. We've got the majority of the data in from lab from the re-sampling we did a couple of weeks back. We're taking a really close look at that. The only thing we're waiting on is some data on technetium-99 to come back. In the meantime, we're going forward on the characterization plan for phase 2 of the sampling plan. There are a couple of questions we're looking to get answers for. We're going through a Data Quality Objective (DQO) process right now. We're gathering all of the information needed to go forward. The draft plan is due out the first week of April.

QUESTION: What does the draft plan cover?

ANSWER: The purpose of the next phase is to determine the nature and extent of the contamination. We only have the one data point right now. We want to know for sure where the contamination is coming from and how far it's traveled. We want to collect any information that would be helpful for making interim remediation decisions. We're working with the Remediation Project on that.

COMMENT: It's always questionable to quickly think of how to remediate until you really know the potential risk. You need to do some type of analysis to determine impact.

RESPONSE: We'll need to sit down with the regulators on that. However, whatever we might decide to do, we would still need to get a better handle on what we're dealing with first. We do not have enough data right now to make any interim corrective action decisions.

DISCUSSION AND FEEDBACK FROM HANFORD ADVISORY BOARD COMMITTEE MEETINGS (Michael Graham):

Moses [Jarayssi] attended the Hanford Advisory Board (HAB) 100 Area Workshop on March 13, and I was at the HAB Environmental Restoration (ER) Committee meeting on the 14th. I'd like to open the floor up to discussion about those meetings. There was an awful lot of GW/VZ info presented at those meetings by Wade Ballard and others.

COMMENT: There was a speaker on the RESRAD (RESidual RADioactivity) computer code that caused some concern. I (Marty Bensky) have heard of RESRAD, but I'm generally unfamiliar with it. How does it fit in with the SAC? The speaker didn't seem aware of the SAC at all. He was totally focused on regulations instead of impacts. What is the nature of the integration between this and the SAC? It seemed like two separate systems.

RESPONSE: They are separate.

QUESTION: Why? Why aren't they using the SAC, or why aren't you using RESRAD?

RESPONSE: In terms of the SAC's use of RESRAD, that's not where the disconnect is. RESRAD is a site-specific tool to determine cleanup standards. The disconnect showed up when he started talking about what a composite analysis might look like and what the SAC should look like. We need to integrate with people about that. The final Record of Decision (ROD) won't be issued without a comprehensive cumulative risk assessment performed, including

eco-risk. The issue of the final ROD will be after that risk assessment. How the composite analysis should be done for the final ROD is where the disconnect lies.

COMMENT: RESRAD is a site-specific tool, but it starts to waffle when it comes to dealing with the 100 Area as a whole.

COMMENT: There needs to be consistency.

RESPONSE: That's right.

COMMENT: RESRAD is a specialized tool designed for a specific purpose. It looks at the specific site and looks at dose. There is no consideration of lateral transmission. It looks at models like irrigation, and some of those would be considered in the SAC system development, but RESRAD would do nothing to help look at the 100 Area as a whole. RESRAD is site specific. It deals with building a house at a specific location or drilling a drinking water well there. Parts of its capabilities might be useful. You have to keep in mind that RESRAD is a special purpose tool that does a good job for its designed purpose, but it's not the big picture type of tool that the SAC is being designed to be.

QUESTION: Aren't there any other Superfund (Comprehensive Environmental Response, Compensation and Liability Act [CERCLA]) sites in the U.S. with multiple individual contaminated sites? Are we breaking new ground there?

ANSWER: Usually sites are cleaned up one at a time. It sounds like we're getting into the old argument of cleaning up the site from a holistic approach or tackling the problems separately.

QUESTION: But is there no precedent elsewhere?

ANSWER: A minor one maybe, but generally they are looked at one at a time.

QUESTION: Is there a requirement to approach cleanup from a sitewide perspective?

ANSWER: There is a DOE requirement in DOE Order 435.1.

QUESTION: That's not what I mean. Is there a CERCLA requirement?

ANSWER: It's required before the final ROD.

QUESTION: Has it been done elsewhere?

COMMENT: The problem here is that there are very few final RODS issued anywhere in the entire nation. We simply haven't gotten there yet.

QUESTION: The interim RODs aren't integrated. Why does the final ROD need to be?

COMMENT: Interim RODs were decided on well before the Integration Project came on the scene. We didn't want to halt progress while we did our integration work. They're just trucking right along, and that's fine. It goes back to available tools. The interim RODs cover quite a bit,

but we need to capture in the SAC the stuff that's left over. Things like the composite analysis for the 100 Area are what we need to get a handle on. That's something we'll provide the capability for. There are definite constancy issues. Look at the 200 Area. There's Fred [Mann] with Immobilized Low Activity Waste (ILAW), Tony [Knepp] with the WMAs, and Bruce [Ford] with the remedial actions. We need to make sure that we function as a team working together to do this. We never wanted to get the Integration Project into the position of model copying.

COMMENT: You don't all need to necessarily be working off of the same model, but you do all need to be operating under the same assumptions.

RESPONSE: Right. There needs to be discussions about that, and there was talk at the HAB 100 Area Workshop about forming a HAB sub-group to talk about that.

RESPONSE: It wasn't real clear on who had the lead to make sure that further meetings were set-up. I think it was left between Dennis Faulk and Greg deBruler.

COMMENT: The person with the most energy from the committee was deBruler, so he will likely be the one coordinating the effort to focus on eco-risk in the 100 Area.

QUESTION: I got a copy of a letter from the Washington State Department of Fish and Wildlife to DOE that points out the absence of baseline work. They recommend that this be initiated and offer cooperation. Why didn't this go though Ecology?

QUESTION: Why would it?

RESPONSE: I thought that Ecology was the voice of the State on Hanford Site cleanup.

RESPONSE: There are four or five state groups that look at Hanford working hand in hand with Ecology.

QUESTION: On the issue of equal risk and why aren't you dealing with that through the SAC, it's not a requirement to do that is it?

ANSWER: Yes it is.

COMMENT: Impacts seem to be sliding by. You rarely hear about any impacts beyond human cancer.

RESPONSE: The SAC includes ecological risk assessment too.

QUESTION: Are there metrics for ecological risk?

ANSWER: Yes.

QUESTION: Are there performance measures that can be looked at in some way to say that this is either acceptable or unacceptable and what the criteria are to make that determination?

ANSWER: It's in the Model Toxic Control Act (MTCA), but there are also studies being done now looking at receptor impact, such as the impact of CrVI on the aquatic receptors in the river.



COMMENT: In the document I saw, it was stated that it was something to be done in the future.

QUESTION: What is?

QUESTION: The ecological matrix. What states what the ecological parameters will be?

ANSWER: We'll be using the Ecology remedial action code and following on the work of the CRCIA screening assessment. There is still data gathering to be done.

COMMENT: The April 15 document will identify the kinds of things that will be considered for SAC Rev. 0.

COMMENT: It will show what you're calculating without applying standards. I just want to know what your standards are.

COMMENT: MTCA doesn't help a whole lot for radionuclides, but they do set standards.

COMMENT: The 15 mrem per year in MTCA seems excessively strict, but I can't see using the alternative of 1 rad per day for impacts on river receptors. That seems excessive.

COMMENT: The SAC will be impact oriented.

COMMENT: Let's get back to discussing the HAB meetings. I (Michael Graham) thought there were good discussions on Thursday on the 200 Area job and on the issues to proceed as planned and the timing of that.

COMMENT: We heard from the U.S. Environmental Protection Agency (EPA) and Greg deBruler, and they said you're wasting time on modeling when you have no data from the 200 Area. More to the point I guess, there were some good rebuttals from the Integration Project on why we need to keep going forward on a sensible total-site path, instead of stopping work in one place in order to go forward faster somewhere else.

COMMENT: My point is that we actually have a lot of information in the 200 Area that hasn't been integrated. There are over a dozen boreholes out there for RCRA. The S&T effort is dealing with getting real samples out of the field. The idea that we have no new data just isn't valid. We've been out there a long time. Sure there are gaps, but we can identify where those are and try to fill those. The plan from CRCIA said itself to do no new data collection.

COMMENT: I agree that going forward with no new data collection would change plans dramatically.

QUESTION: What about the data from CS-1 and CW-1?

ANSWER: That's all new information, plus there's the MACTEC logging information. There's data in the field to be had from the RCRA wells.

QUESTION: Where are things in the negotiations between Ecology and DOE-RL on the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Milestone M-24?

ANSWER: Ecology and DOE-RL are in dispute over the number of wells required.

COMMENT: It's a RCRA thing. DOE-RL has prepared a dispute letter for Ecology over the number of wells required in FY00.

COMMENT: It's my understanding that the two sides have agreed on most of the wells though.

RESPONSE: That's true. Most of wells have been reconciled. There are only a few in dispute.

QUESTION: Is it just a matter of disagreeing on the number of wells and their locations?

ANSWER: There's also an issue over the timing versus the need for the data. There are some wells identified by Ecology as needed this year, but DOE-RL questions if the data from those sources is really needed this fiscal year. They feel the data from those sources could wait until next fiscal year to be collected.

COMMENT: Nonetheless there's data there that needs to be collected.

QUESTION: Are you looking for hydrologic data?

ANSWER: No, this is about RCRA data requirements, but there is of course an opportunity to get data for multiple programs.

QUESTION: I'm curious about the screening assessment. Do you identify what contaminants were introduced to the river at specific locations?

RESPONSE: No. It's based on general river monitoring data.

QUESTION: In some scenarios there might be a hazard index above one. Does the assessment indicate which contaminants contribute the most to the index?

ANSWER: Yes.

COMMENT: It takes into account the contribution of mining wastes and other stuff from upstream as well.

COMMENT: You've mentioned what CRCIA came up with. The intent of CRCIA Part 1 was not to identify real risk, but rather relative risk. It's a screening report. It doesn't cover real risk, for example the risk to fisherman standing in the river. It's looking to identify potential risk.

QUESTION: Without taking the quantitative numbers too seriously, did it identify what materials were the sources of the hazard index?

ANSWER: Yes.

COMMENT: And that was primarily from mining waste.

RESPONSE: No, not necessarily.

COMMENT: You can't push aside the contribution of the mining wastes.

COMMENT: I have reservations about the presence of mining wastes and other contaminants from upstream in the sediments. I'm not sure it wasn't a function of particle size rather than source. The screening was not intended to establish where the contaminants came from. There's a potential for these to be Hanford derived contaminants.

QUESTION: Is there anywhere that states what contaminants came from where?

ANSWER: There are very few data points, so it's hard to draw conclusions. We have managed to identify areas that need a further look. We need to reanalyze the data before we get too excited one way or the other.

COMMENT: It seems like some of this would be good for the SAC or S&T to work on.

RESPONSE: It might, but that's DOE's call.

#### ISSUES MANAGEMENT INTERNET INPUT FORM (Michael Graham)

In an effort to provide stakeholders with as many ways to voice concerns as possible, we've added an issue submittal form onto our website. You'll find it on the Integration Project website (<http://www.bhi-erc.com/vadose>) in the Issues Management section.

The idea is to get technical issues or general comments about the Project submitted electronically. We'll take those and pull them into our issues tracking system. We'll use that system to show how the issue is tracked, prioritized, and dispositioned. It just seems like the right thing to do. Hopefully it works well. We're hoping that it doesn't end up crashing the servers. This is being done in the spirit of trying to have people feel part of the project and to capture different perspectives. We've already input issues received from some of the working group meetings into the system.

QUESTION: Have you received any electronically submitted issues yet?

ANSWER: Not yet. It's a brand new thing for us.

QUESTION: Are there instructions along with the input form?

ANSWER: Yes. We've listed a few general guidelines. Hopefully we don't run into a problem with the level of detail of the issues, but we'll see what happens.

**UPCOMING EVENTS AND OPPORTUNITIES FOR PARTICIPATION:**

See attached calendar (Attachment 1).

COMMENT: Bob Bryce talked about a SAC Rev. 0 review by two of the IPEP members. Once that's scheduled, we'll put that on the calendar. We're right now targeting the first week of May.

COMMENT: We're trying to set up the next Regulatory Path Forward Work Group meeting for either the day before or the day after the next HAB-ER Committee meeting. That would mean either April 10 or 12. We had originally thought about April 5, but that's out due to an Environmental Protection Agency (EPA) commitment elsewhere. (Note: The meeting has been set for April 10.)

**NOTES:**

GW/VZ Web Site location: <http://www.bhi-erc.com/vadose>

If you have questions or comments please contact Dru Butler (509-375-4669), Gary Jewell (509-372-9192), or Karen Strickland (509-372-9236)

**ATTACHMENTS:**

1) GW/VZ Integration Project Two Month Look Ahead Calendar

**ATTENDEES:**

Martin Bensky – Tri-Cities Caucus  
Jane Borghese – CHI  
Bob Bryce – PNNL  
Dru Butler – BHI  
Dib Goswami – Ecology  
Michael Graham – BHI  
Mary Harmon – DOE-HQ  
Dave Holland – Ecology  
Kathy Huss – SAIC  
Dick Jaquish – WDOH  
Moses Jarayssi – BHI

Gary Jewell – BHI  
Tony Knepp – CHG  
Katy Makeig – SMS  
Fred Mann – CHG  
Gary McNair – PNNL  
Shri Mohan – Ecology  
Gordon Rogers – HAB  
Steve Sautter – BHI  
Dan Tano – DOE-RL  
Mike Thompson – DOE-RL

## Attachment 1

GW/VZ INTEGRATION PROJECT  
**APRIL 3 – JUNE 5, 2000**  
 TWO MONTH LOOK AHEAD CALENDAR

<b>April 3</b>	GW/VZ Open Project Team Meeting BHI Assembly Room – 1-3 p.m. (Contact: Dru Butler )
<b>April 6-7</b>	Hanford Advisory Board Meeting Richland, WA – Red Lion Hanford House
<b>April 10</b>	GW/VZ Regulatory Path Forward Work Group Final Workshop on 100 Area Cleanup Integration BHI Room 1B40 – 1-4 p.m. (Contact: Moses Jarayssi)
<b>April 11</b>	HAB Environmental Restoration Committee Meeting PNNL EMSL Building Room 1077 – 9 a.m.-4 p.m.
<b>April 11-12</b>	National Research Council Committee on Remediation S&T at Hanford Richland, WA – Red Lion Hanford House
<b>April 17</b>	GW/VZ Open Project Team Meeting <b>*NEW LOCATION* BHI Room 2D01</b> – 1-3 p.m. (Contact: Dru Butler )
<b>May 1</b>	GW/VZ Open Project Team Meeting BHI Assembly Room – 1-3 p.m. (Contact: Dru Butler )
<b>Early May</b>	<i>GW/VZ discussion with IPEP representatives on SAC Rev. 0 Design Report Richland, WA (Contact: Bob Bryce)</i>
<b>May 9</b>	HAB Environmental Restoration Committee Meeting BHI Assembly Room – 8 a.m.-4 p.m.
<b>May 15</b>	GW/VZ Open Project Team Meeting BHI Assembly Room – 1-3 p.m. (Contact: Dru Butler )
<b>May 24-26</b>	Integration Project Expert Panel (IPEP) Meeting BHI Assembly Room
<b>May 31</b>	HAB Public Involvement Committee Meeting LaGrande, OR
<b>June 5</b>	GW/VZ Open Project Team Meeting BHI Assembly Room – 1-3 p.m. (Contact: Dru Butler )

(Note: Italics denote tentative event schedules)